

Objective	Description	Citation / Reference	
1. SERVICES DEFINITIONS			
1.1	Describe and distinguish between the service attributes of:- EPL/EVPL EP-LAN/EVP-LAN EP-Tree/EVP-Tree Access EPL/Access EVPL	MEF 6.2 MEF 10.3	MEF 45 MEF 33
1.2	Describe how EPL, EVPL, EP-LAN, EVP-LAN, EP-Tree, and EVP-Tree are used to meet various subscriber		
2. TRANSPORTING CARRIER ETHERNET SERVICES			
2.1	Describe the connectivity properties of bridging, provider bridging, provider backbone bridging (PBB), provider backbone bridging with traffic engineering extensions (PBB-TE), Ethernet over SONET/SDH, Carrier Ethernet over MPLS VPWS, Carrier Ethernet over MPLS VPLS, Carrier Ethernet over MPLS TP, Carrier Ethernet over OTN, and Carrier Ethernet over WDM.	IEEE 802.1Q-2011	IETF RFC 4448
2.2	Describe the capabilities of the bridging, provider bridging, provider backbone bridging (PBB), provider backbone bridging with traffic engineering extensions (PBB-TE), SONET/SDH, MPLS VPWS, MPLS VPLS, MPLS TP, OTN and WDM with regards to delivery of Carrier Ethernet services.	IETF RFC 4761	IETF RFC 5921
2.3	(Removed)	IETF RFC 5960	ITU-T G.8031
2.4	Describe the advantages of specific Carrier Ethernet transport technologies.	ITU-T Y.1415	ITU-T G.8032
2.5	Describe service protection mechanisms.	MEF White Paper: Ethernet Services and Access Technologies Optimizing Mobile Backhaul Presentation	
3. CARRIER ETHERNET ACCESS TECHNOLOGIES			
3.1	Describe the capabilities of Ethernet over PDH, Ethernet over bonded copper, Ethernet over HFC, Ethernet over packet radio, Ethernet over fiber and Ethernet over PON.	Carrier Ethernet Access Reference Presentation	
3.2	Describe the advantages of specific Carrier Ethernet Access technologies.	IEEE 802.3-2005	IEEE802.16-2009
3.3	Given a scenario, identify which Carrier Ethernet Access Technology will meet the stated requirements.	MEF White Paper: Ethernet Services and Access Technologies	
4. BASIC DEFINITIONS			
4.1	Define Ethernet User-to-Network Interface (UNI), Ethernet External Network-to-Network Interface (ENNI), Ethernet Virtual Connection (EVC), Service Provider, Operator, and Operator Virtual Connection (OVC).	MEF 10.3	MEF 26.1
4.2	Describe the role of Ethernet User-to-Network Interface (UNI), Ethernet External Network-to-Network Interface (ENNI), Ethernet Virtual Connection (EVC), Service Provider, Operator, and Operator Virtual Connection (OVC).	MEF 33	
5. KEY UNI, ENNI, OVC & EVC SERVICE ATTRIBUTES			
5.1	Define per UNI service attributes (e.g., physical interfaces, Frame format, Ingress/egress Bandwidth Profiles, CE-VLAN ID/EVC Map, UNI protection).	MEF 6.2	MEF 45
5.2	Define EVC per UNI service attributes (e.g. ingress/egress Bandwidth Profiles).	MEF 10.3	MEF 20
5.3	Define per EVC service attributes (e.g., CE-VLAN ID Preservation, CoS ID Preservation, Relationship between Service Level Agreement and Service Level Specification, Class of Service).	MEF 23.1	MEF 26.1
5.4	Define OVC End Point per UNI and OVC End Point per ENNI service attributes (e.g., ingress/egress bandwidth profiles).	MEF 33	IEEE 802.1AX
5.5	Describe bandwidth profiles		
5.6	Given a service scenario, describe relevant service attribute settings/parameters.		
5.7	Define and describe the components of a Service Level Specification and the relationship to Service Level Agreement.		
5.8	Define and describe ENNI attributes (e.g., physical interfaces, Frame format, Ingress/egress Bandwidth Profiles, End Point Map, ENNI protection).		
5.9	Define and describe OVC attributes (e.g., CE-VLAN ID Preservation, CoS ID Preservation, Relationship between Service Level Agreement and Service Level Specification, Class of Service, hairpin switching).		
5.10	Define and describe the Carrier Ethernet protection mechanisms.		
6. CERTIFICATION			
6.1	Describe the MEF Certification process and requirements for networking equipment		
6.2	Describe the MEF Certification process and requirements for services delivered by a service provider		
6.3	Describe what is covered by CE 2.0 Certifications		
6.4	Describe the deliverables of MEF Certification for equipment vendors, service provider, and Carrier Ethernet certified professionals		
7. TARGET APPLICATION FOR ETHERNET SERVICES			
7.1	Describe wholesale access services, retail commercial/business services, mobile backhaul services, Ethernet access to IP services, and supporting legacy services over Ethernet.	MEF 6.2	MEF 8
7.2	Describe which UNI or ENNI attribute values are selected for a given target application.	MEF 10.3	MEF 22.1
7.3	Describe which EVC or OVC attribute values are selected for a given target application.	MEF 26.1	MEF 33
7.4	Describe how specific service requirements of a target application (e.g., frame relay, Dedicated Internet Access, DSL or Cable Internet access, TDM Private Lines, WDM private network are met using Ethernet services)	MEF 45	
7.5	Given a scenario, determine appropriate Ethernet services.	Carrier Ethernet Access Reference Presentation Mobile Backhaul Reference Presentation White Paper Introduction to CESoE	

8. COMPARING AND POSITIONING ETHERNET SERVICES			
8.1	Compare and contrast Ethernet services with L2, IP, and TDM private line services.	MEF 6.2	MEF 8
8.2	Given a scenario, recommend an Ethernet service to meet end user specifications.	MEF 10.3	MEF 22.1
		MEF 33	IETF RFC 4448
		White Paper Introduction to CESoE	
9. CIRCUIT EMULATION OVER ETHERNET			
9.1	Define the purpose and need for Circuit Emulation over Ethernet applications.	Carrier Ethernet Access Reference Presentation	
9.2	Define the critical components of circuit emulation over Ethernet service.	MEF 8	MEF 22.1
9.3	Define the MEF Service Definitions used to deliver emulated circuits.		
9.4	Define the EVC service attributes required for emulated circuits.		
9.5	Define the three techniques and their uses for delivering synchronized clock over emulated circuits (e.g., Adaptive, 1588v2, Synchronous Ethernet, NTP, PTP).		
9.6	Describe how circuit emulation is used in Mobile Backhaul applications.		
10. SERVICE OPERATIONS, ADMINISTRATION & MAINTENANCE (SOAM)			
10.1	Describe the various partitioning of responsibilities for Service Operations Administration and Maintenance (SOAM).	MEF 6.2	MEF 8
10.2	Describe the basic mechanisms for fault management	MEF 10.3	MEF 17
10.3	Describe the basic mechanisms for performance monitoring.	MEF 30.1	MEF 30.1.1
10.4	Describe the basic metrics for performance monitoring.	ITU-T Y.1731	MEF 35
10.5	Describe the Service Lifecycle	Carrier Ethernet Interconnect Reference Presentation	

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